REMARKS

In the Office Action dated October 5, 2005, claims 1-20 are pending in the above application. Claims 1, 11, and 20 are independent claims from which all other claims depend therefrom. Claims 12-19 are herein amended for informality reasons.

Claims 12-19 stand objected to for informality reasons. Specifically, claims 12 and 13 ought to depend from claims 11 and 12, respectively, as opposed to claims 10 and 11. Claims 12 and 13 are herein amended to correct the stated claim dependency. Also, claims 12-19 in depending from claim 11, which in the preamble thereof recites a "method", ought to also recite a "method" as opposed to a "system" in the preamble of each claim. Claims 12-19 are herein amended to correct the preambles thereof as stated.

The Office Action states that claims 1-20 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Soucy (U.S. Pat. No. 6,476,510) and Lacy (U.S. Pat. No. 6,510,369).

Independent claims 1, 11, and 20 have similar limitations and are thus described together. Claim 1 recites a secondary electrical load power management system for an aircraft that includes multiple secondary electrical loads, an aircraft flight condition sensor, and a controller. The controller determines engine secondary power extraction and the current operating conditions of the aircraft. An engine secondary power extraction limit is determined in response to the current operating conditions. The secondary electrical loads are operated in response to the engine secondary power extraction limit and the engine secondary power extraction. Claims 11 and 20 recite methods of controlling electrical load power consumption during operation of an aircraft and include similar limitations as above stated.

In general "secondary loads" refer to loads that are not used for flight or maneuvering of an aircraft. Secondary loads, for example, may include a fuel pump, a hydraulic pump, a hydraulic load, an electric generator and electrical devices that receive power from that generator, and other known aircraft

secondary loads. On the other hand, "primary loads" refer, in general, to the aircraft engines and devices included therewith, such as turbines, high-pressure shafts, compressors, and throttles. Of course, these are only some of the secondary and primary loads that may exist on an aircraft.

The claimed invention allows an aircraft to be designed to include direct power secondary electrical loads that have a combined rated total power consumption level that is greater than that of rated maximum secondary power extraction of an aircraft engine. Thus, the claimed invention allows an engine to supply an increased amount of electrical power and satisfy electrical power consumption requirements for an increased number of secondary electrical loads during certain operating conditions.

The Office Action states that Soucy teaches the following items: a power management system having a generator, a load, an engine speed sensor, and a fuel supply controller and governor. Applicants submit that the assertion of Soucy having the stated items is irrelevant. Most modern aircraft have the stated items. A majority of the stated items are also mentioned in the background section of the present application.

The Office Action states that Soucy fails to teach how the controller controls the system to work efficiently. Applicants agree and submit that Soucy fails to teach or suggest the limitations of determining engine secondary power extraction of an aircraft, determining a engine secondary power extraction limit in response to current operating conditions of the aircraft, and operating secondary electrical loads in response to the engine secondary power extraction limit and the engine secondary power extraction. Soucy simply measures power demanded and power supplied and adjusts the power supplied to meet the power demanded. Soucy provides nothing with respect to power management between primary and secondary loads, and especially not as claimed.

The Office Action then states that Lacy teaches the control claimed. Applicants, respectfully, traverse and submit that not only does Lacy not teach or suggest the control claimed, but that Lacy is nonanalogous art and is not a reasonable and proper prior art reference.

Lacy discloses a residential electrical system for controlling the electrical supply to residential homes. The residential system includes a fuel cell system that supplies electricity to residential homes having controlled loads and uncontrolled loads. The controlled loads refer to appliances that can be disconnected via a load sense and switch circuit, and uncontrolled loads refer to appliances that can only be disconnected via circuit breakers in a house. The electrical system regulates the electrical connections of the load sense and switch circuits to prevent the residential electrical loads from exceeding a power threshold. The control circuit of Lacy monitors the output power of the fuel cell system to all of the residential loads including the controlled and uncontrolled loads. Based on that output power, the control circuit regulates the controlled loads.

The system of Lacy does not make any distinction between which loads are of primary or higher importance. Lacy simply controls the loads that can be regulated via the load sense and switch circuits. Although Lacy discloses determining the power demand from specific controlled loads, this information is used to determine priority of which controlled load is to be deactivated. The loads that demand more power are deactivated first. Lacy does not determine the combined power demand of the controlled loads nor is a power limit set on the controlled loads as a group. Clearly Lacy's residential system is completely unrelated and operates in a substantially different manner than the system and methods claimed.

Applicant is unsure of the U.S. classification of the present application, but notes that Lacy is clearly not of the same U.S. classification as Soucy. Referring to MPEP 2141.01(a), while the Patent Office classification of references and cross-references in the official search notes are some evidence of "nonanalogy" or "analogy" respectively, the court has found "the similarities and differences in structure and function of the inventions to carry far greater weight." *In re Ellis*, 476 F.2d 1370, 1372, 177USPQ526, 527 (CCPA 1973). In addition, to the classifications of the references inferring nonanalogy, Applicants submit that the structure, function, and purpose of the system of Lacy are also

clearly different than that of Soucy and the present invention. Lacy would not have logically commended itself to the inventors' attention in considering the problems solved by the system and methods of claims 1, 11, and 20.

In developing an aircraft secondary electric load controlling system and similar methods thereof, one would clearly not look to a residential electrical system for controlling the amount of power demanded from a fuel cell subsystem. Activating and deactivating controlled appliances to limit the power output of a fuel cell subsystem in a residential setting is substantially different and unrelated to managing power between primary and secondary loads of an aircraft. In the aircraft setting one is maintaining power to the primary loads while limiting power to the secondary loads to maintain flight and maneuverability of the aircraft. In the residential setting one is simply preventing an overload situation on a fuel cell subsystem. Lacy would not be reasonably pertinent to the particular problems solved by the claimed invention. Thus, the Applicants submit that Lacy is nonanalogous art and to use such a reference is improper and far reaching at best.

Furthermore, Applicants understand that limitations from the specification ought not to be read into the claims, however, Applicants submit that the claims ought to be read in light of and in a consistent manner in view of the specification. It would not be consistent with the specification of the present application to interpret the terms "secondary loads" as associated with an aircraft as an electrical load within a residential circuit. Besides, Lacy does not distinguish between primary and secondary loads nor does the circuit of Lacy operate as the claimed system and methods.

Moreover, there is no motivation or suggestion provided in the references or put forward for the combination and modification of the stated references as is required to arrive at the present invention. See *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Simply put, Soucy does not provide any pertinent teachings and Lacy is nonanalogous art and is unrelated to both Soucy and the claimed invention. Applicants are unsure how the stated references would be combined and what would be achieved by such combination.

Referring to MPEP 706.02(j) and 2143, to establish a *prima facie* case of obviousness the prior art references must teach or suggest all the claim limitations. Since, both Soucy and Lacy fail to teach or suggest alone or in combination each and every element of claims 1, 11, and 20, they are novel, nonobvious, and are in a condition for allowance. Since claims 2-10 and 12-19 depend from claims 1 and 11, they too are novel, nonobvious, and are in a condition for allowance for at least the same reasons.

In light of the amendments and remarks, Applicants submit that all of the rejections are now overcome. The Applicants have added no new matter to the application by these amendments. The application is now in condition for allowance and expeditious notice thereof is earnestly solicited. Should the Examiner have any questions or comments, the Examiner is respectfully requested to contact the undersigned attorney.

Respectfully submitted,

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